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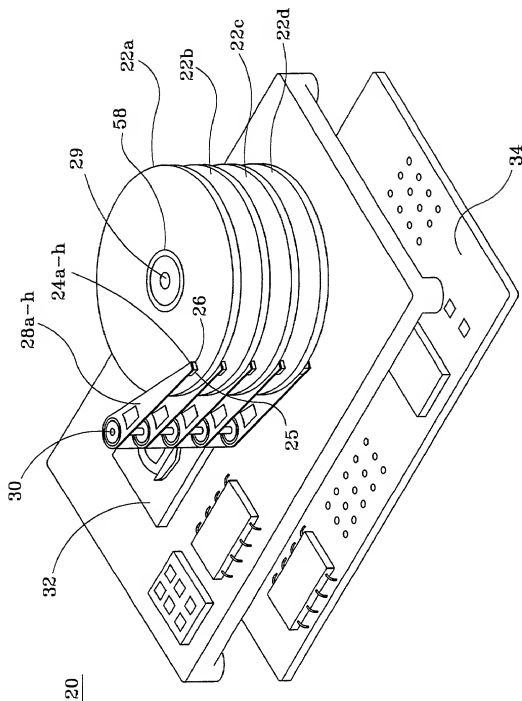


Figure 1

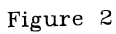


Figure 2

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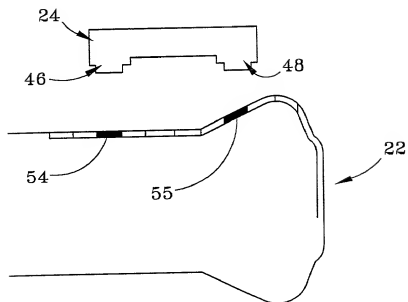


Figure 3A

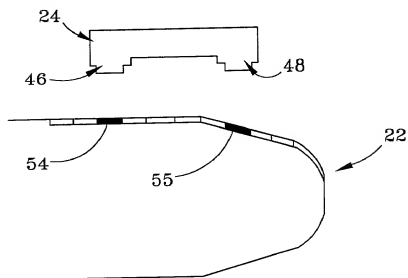


Figure 3B

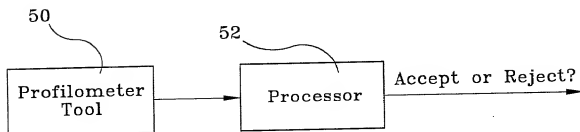


Figure 4

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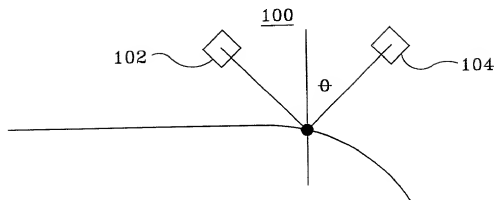


Figure 5A

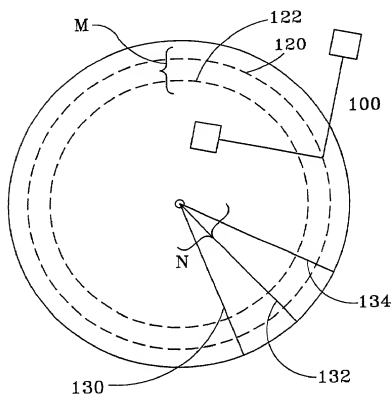


Figure 5B

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Raw Data:  $S_{ij}$ ,  $i = 1, \dots, M$ ,  $j = 1, \dots, N$   
 Slope-scan type of instruments  
 Radial slopes with  $N$  radial lines and  $M$   
 circumferential tracks. 600



Track Averaging (circumferential averaging):  
 Averaging the measured slopes at the same  
 circumferential track for all tracks. 602

$$\hat{S}_i = \sum_{j=1}^N S_{ij} / N, i = 1, \dots, M$$


Radial Moving Averaging (in  $l$  tracks): 604

$$\bar{S}_i = \sum_{k=i}^{i+l} \hat{S}_k / l, i = 1, \dots, M-l$$


Radial Derivatives (curvature): 606

$$C_i = (\bar{S}_i - \bar{S}_{i+1}) / (l \times \text{track width}), i = 1, \dots, M-l$$

Figure 6

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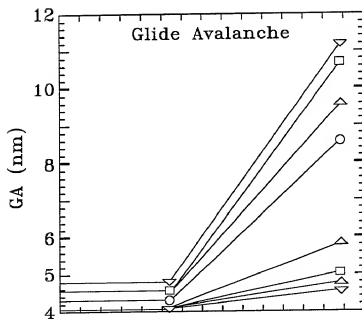


Figure 7A

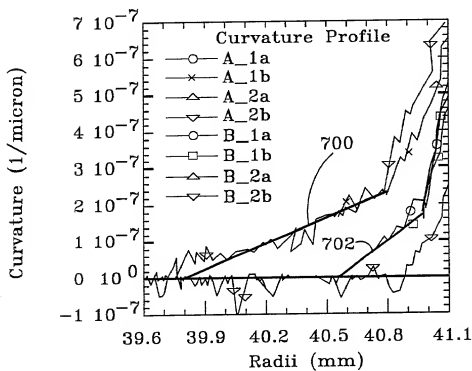


Figure 7B

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Fly Height (nm)		11.4	10.2	8.9	7.6
cell 1 glide radii (mm)	c1_1	47.04	46.99	46.91	46.81
	c1_2	47.02	46.96	46.89	46.79
	c1_3	46.99	46.94	46.86	46.74
	c1_4	47.02	46.96	46.89	46.81
	c1_5	47.04	46.99	46.91	46.81
	cell1 avg.	47.02	46.97	46.89	46.79
cell 2 glide radii (mm)	c2_1	47.04	47.04	47.07	46.96
	c2_2	47.12	47.12	47.04	46.94
	c2_3	47.12	47.12	47.04	46.94
	c2_4	47.12	47.12	47.07	46.99
	c2_5	47.12	47.12	47.09	46.99
	cell2 avg.	47.10	47.10	47.06	46.96
cell 3 glide radii (mm)	c3_1	47.22	47.14	47.07	46.91
	c3_2	47.24	47.17	47.09	46.94
	c3_3	47.17	47.09	46.99	46.86
	c3_4	47.29	47.27	47.22	46.14
	c3_5	47.32	47.29	47.24	46.17
	cell3 avg.	47.25	47.19	47.12	47.01
cell 4 glide radii (mm)	c4_1	47.22	47.22	47.17	47.04
	c4_2	47.22	47.17	47.09	46.96
	c4_3	47.17	47.02	47.02	46.99
	c4_4	47.22	47.22	47.17	47.04
	c4_5	47.27	47.24	47.22	47.12
	cell4 avg.	47.22	47.17	47.13	47.03

Figure 8

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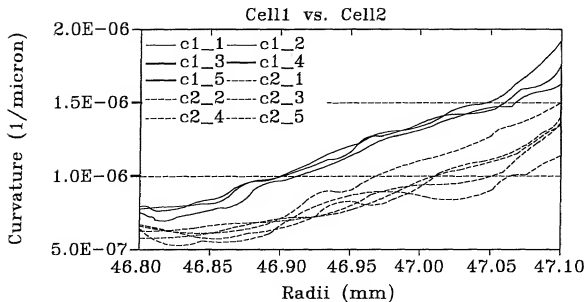


Figure 9A

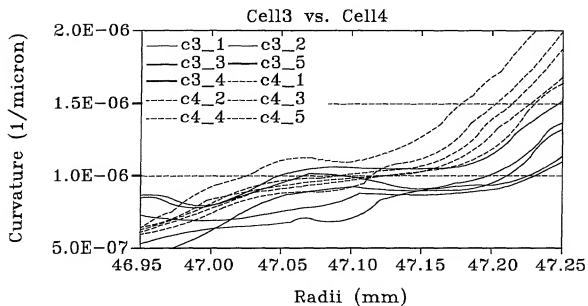


Figure 9B